

SERVICE MANUAL

BC-4 CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KV-14V5A	RM-C810	Italian	SCC-N40D-A	KV-14V6A	RM-C810	Italian	SCC-N40B-A
KV-14V5B	RM-C812	French	SCC-N42D-A	KV-14V6B	RM-C812	French	SCC-N42B-A
KV-14V5D	RM-C810	AEP	SCC-N39D-A	KV-14V6D	RM-C810	AEP	SCC-N39B-A
KV-14V5E	RM-C810	Spanish	SCC-N41D-A	KV-14V6E	RM-C810	Spanish	SCC-N41B-A
KV-14V5K	RM-C813	OIRT	SCC-N32C-A	KV-14V6U	RM-C811	UK	SCC-N43B-A
KV-14V5U	RM-C811	UK	SCC-N43D-A				

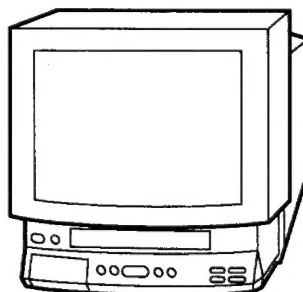
Refer to the SERVICE MANUAL of VHS MECHANICAL
ADJUSTMENT IV for MECHANICAL ADJUSTMENT.
(Part No. 9-973-623-11)



RM-C813



RM-C810
RM-C811
RM-C812



※ Please file according to model size. ■

TRINITRON® COLOR VIDEO TV
SONY®

SPECIFICATIONS

TV Section

Television system	B/G,L
Color system	PAL,SECAM
	NTSC _{3.58} /NTSC _{4.43} (VIDEO input only)
Channel coverage	See "Receivable channels and channels display" below.
Picture tube	Black Trinitron
Aerial in	75-ohm aerial socket for VHF/UHF

Video Section

Format	VHS standard
Video recording system	Rotary 2-head helical scanning system
Audio recording system	Monaural
Video signal	PAL/SECAM
Tape speed	PAL/SECAM SP : 23.39mm/sec. LP : 11.70mm/sec. (PAL only)
	NTSC SP : 33.35mm/sec. LP : 11.12mm/sec.
Maximum recording time	SP : 4 hours with E-240 LP : 8 hours with E-240

Inputs and Outputs

Inputs	LINE IN VIDEO:phono jack (1) 1 Vp-p, 75 ohms, unbalanced, sync negative LINE IN AUDIO:phono jack (1) Input level:500 mVrms (100% modulation)
Output	EURO-AV : 21-pin
Head Hone Jack	EURO-AV : 21-pin Monaural minijack

General

Clock	Quartz locked
Clock back up	Approx. 7days
Power requirements	220-240 V AC, 50Hz

Power consumption

KV-14V5A,B,D,E,K	: 67W
KV-14V6A,B,D,E	: 73W
KV-14V5U	: 71W
KV-14V6U	: 77W

Operating temperature

5°C to 40°C(41°F to 104°F)

Storage temperature

-20°C to 60°C(-4°F to 140°F)

Dimensions

397 x 409 x 426 mm (w/h/d)
(15³/₄ x 16¹/₈ x 16⁷/₈ inches)

Mass

14kg (30 lb 14 oz.)

Accessories supplied

Remote Control (1)
R6 (size AA) batteries (2)
Aerial (1)

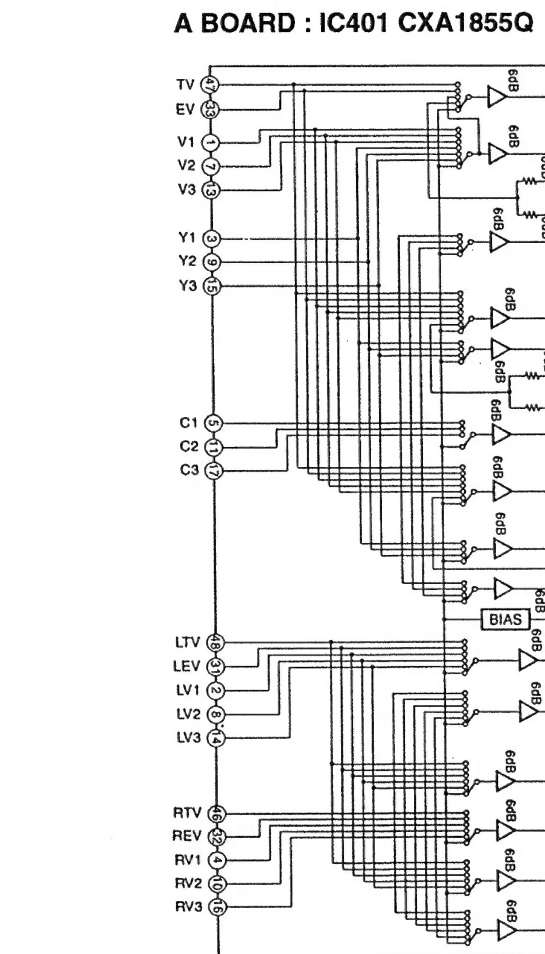
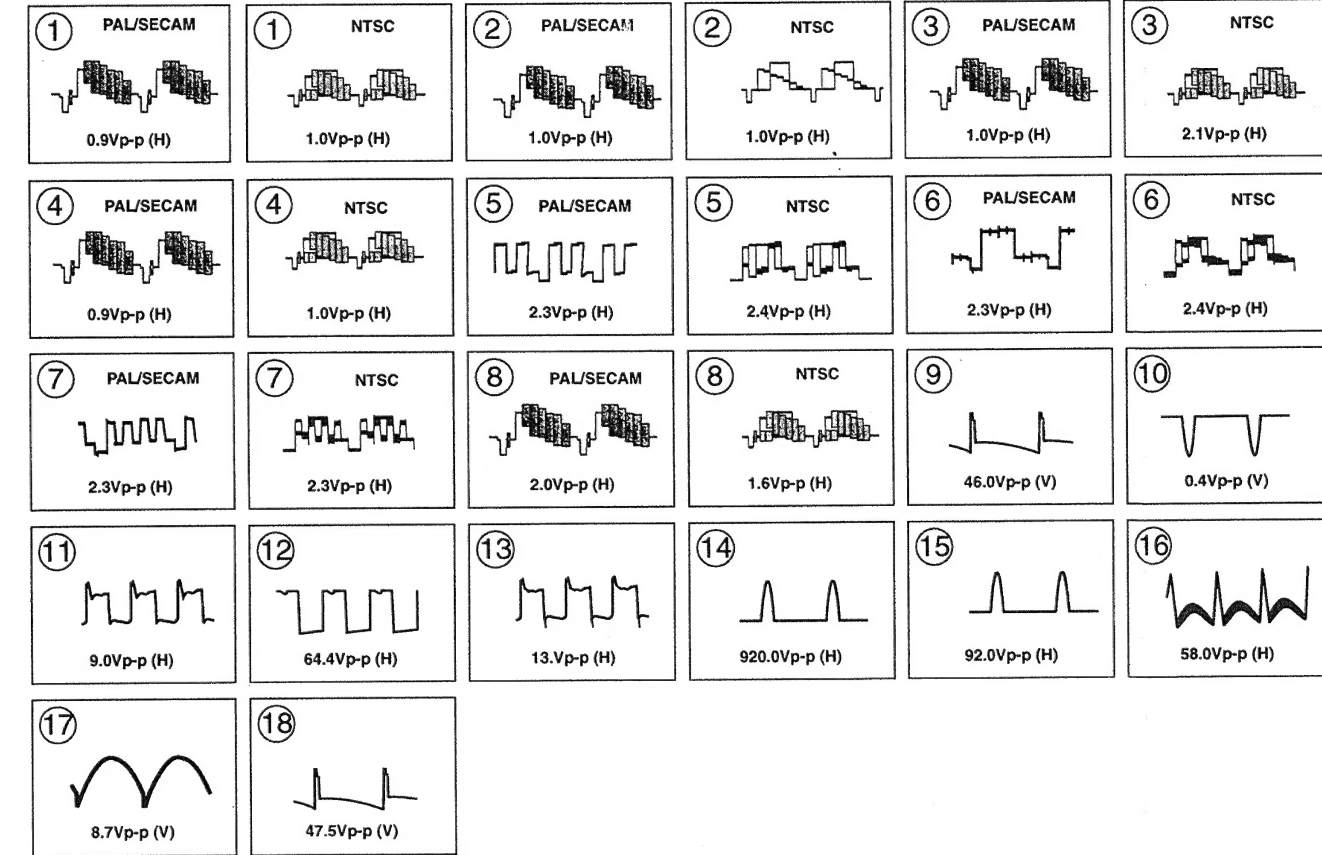
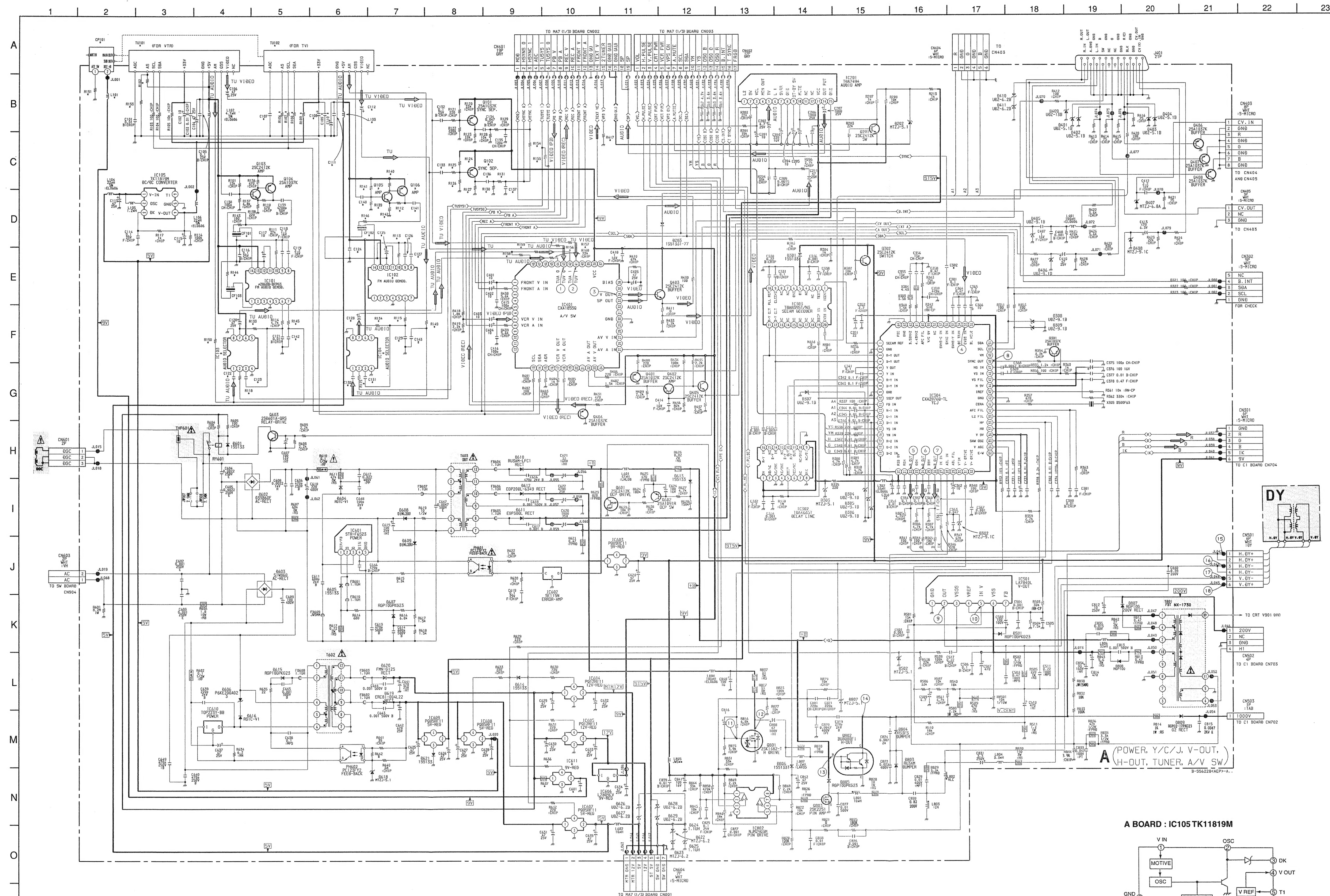
Design and specifications are subject to change without notice.

Note

This appliance conforms with the EU Directive 89/336/EE3 regarding interference suppression.

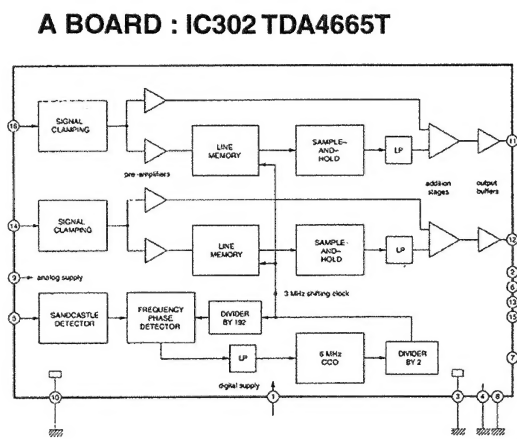
Receivable channels and channel displays

TV System Band	B/G	L(B)	I(U)	D/K(K)
Low VHF band	E2-E4	F2-F4	—	R1-R5
Hight VHF band	E5-E12	F5-F10	—	R6-R12
UHF	E21-E69	F21-F69	B21-B69	R21-R69
CATV	S01-S05	B-Q	—	S01-S05
	S1-S41	S21-S44	—	S1-S41



A BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q101	8.5	2.2	8.9
Q102	8.5	2.1	8.9
Q103	1.7	4.3	1.1
Q104	4.3	2.9	4.9
Q105	1.7	4.3	1.1
Q106	4.2	2.8	4.9
Q201	0.7	0	GND
Q301	4.6	GND	5.3
Q302	0	8.9	0
Q401	3.8	GND	4.4
Q402	3.9	6.4	3.3
Q403	3.7	8.9	5.8
Q404	1.1	GND	1.8
Q405	6.4	8.9	5.8
Q406	0	GND	0
Q407	0	GND	0
Q408	0.6	GND	0
Q601	0.6	3.4	GND
Q602	116.7	116.9	117.3
Q603	0.7	0.1	GND
Q802	-0.2	117.9	GND

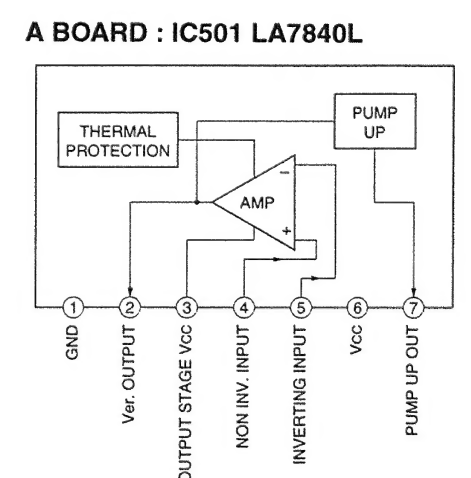


A BOARD IC VOLTAGE LIST

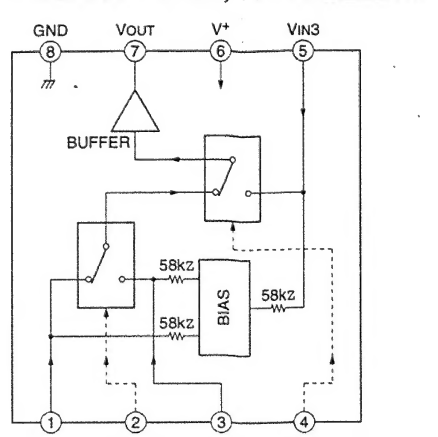
IC101	1	1.9	IC302	5	5	IC304	40	40	IC602	0	0		
	2	1		8	GND		41	2.3		IC601	0		
	6	2.1		9	5.1		42	GND		O	115.5		
	7	1.8		10	GND		43	1.7		G	GND		
	8	2.0		11	3.0		44	8.8		IC503	1		
	9	2.0		12	3.0		45	2.5		1	12.4		
	10	1.8		13	4.5		46	4.0		3	8.9		
	11	4.3		16	1.4		47	3.1		IC604	1		
	12	0		1	1.5		48	4.5		2	12.0		
	13	4.9		5	GND		50	4.7		3	GND		
IC102	14	1.8	IC303	6	GND	IC305	51	3.7	IC605	1	5.5		
	4	GND		9	3.5		52	4.1		1	13.5		
	4	GND		10	4.3		53	4.0		2	12.0		
	6	1.6		11	5.7		54	5.0		3	GND		
	7	2.1		12	2.9		55	3.5		4	2.5		
	8	2.0		19	6.7		56	3.6		IC606	1		
	9	2.0		20	1.5		59	8.8		O	8.9		
	10	1.8		1	4.8		60	5.5		G	GND		
	11	4.3		2	GND		61	2.4		IC607	1		
	12	0		3	5.6		62	7.1		2	5.3		
IC103	13	4.9	IC304	4	5.6		IC401	63		GND	3	GND	
	14	1.8		5	3.8	IC401		1		3.8	4	3.5	
	1	3.1		6	5.0			2	3.8	IC608	1	6.4	
	2	0.1		7	5.4			7	3.8		2	5.6	
	3	3.3		8	5.4			8	3.8		3	GND	
	4	GND		9	GND			13	4.6		4	2.9	
	6	4.9		10	5.7			14	4.6		IC609	1	
	7	2.4		11	0			15	0		2	5.6	
	8	GND		12	0.5			17	3.6		3	6.4	
	10	3.3		13	5.4			18	3.9	IC610	1	13.7	
	2	4.5		14	5.4			22	3.8		G	GND	
IC104	3	3.1	IC305	15	0.1			23	3.7		O	19.0	
	4	GND		16	0.1			25	3.8		IC611	0	
	7	4.9		17	5.4			27	3.8		2	5.3	
	7	2.4		18	5.4			30	0		3	GND	
	8	GND		19	5.4			33	3.8		4	3.5	
	1	4.9		20	8.8			34	3.7	IC802	1	1.2	
	2	4.9		21	5.2			36	3.8		2	3.9	
	3	3.3		22	1.1			38	8.9		3	2.0	
	4	3.21		23	5.1			41	3.8		4	GND	
	5	GND		24	1.2		42	0	5		3.1		
IC201	2	0	IC306	25	4.9	IC501	43	3.8	IC612	8	1.4		
	3	3.4		26	1.2		44	8.8		7	8.3		
	5	8.5		27	4.9		1	GND		6	9.0		
	7	8.5		28	1.3		2	0.1		PH601	1	11.2	
	8	GND		29	7.2		3	12.3			10	10.7	
	9	0.3		31	2.9		4	1.2			3	6.3	
	10	0		33	3.6		5	1.4			3	1.4	
	13	16.8		34	4.2		6	24.3			4	19.0	
	14	8.6		35	4.6		7	1.3			PH602	1	6.9
	15	0		36	4.6		1	1.7				2	5.3
16	3.1	37	3.3	2	0.1	3	1.3						
IC302	4	GND	38	3.4	3	0.3	4	-5.7					
	4	GND	39	5.8	4	18.6							

matic diagrams

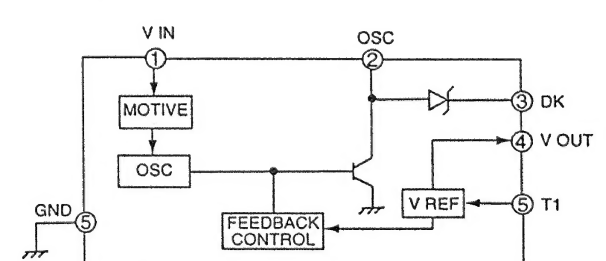
Schematic diagrams



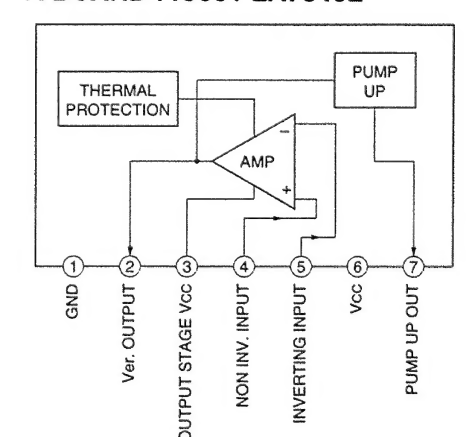
A BOARD : IC103, 104 NJM2521M



A BOARD : IC105 TK11819M



A BOARD : IC501 LA7840L

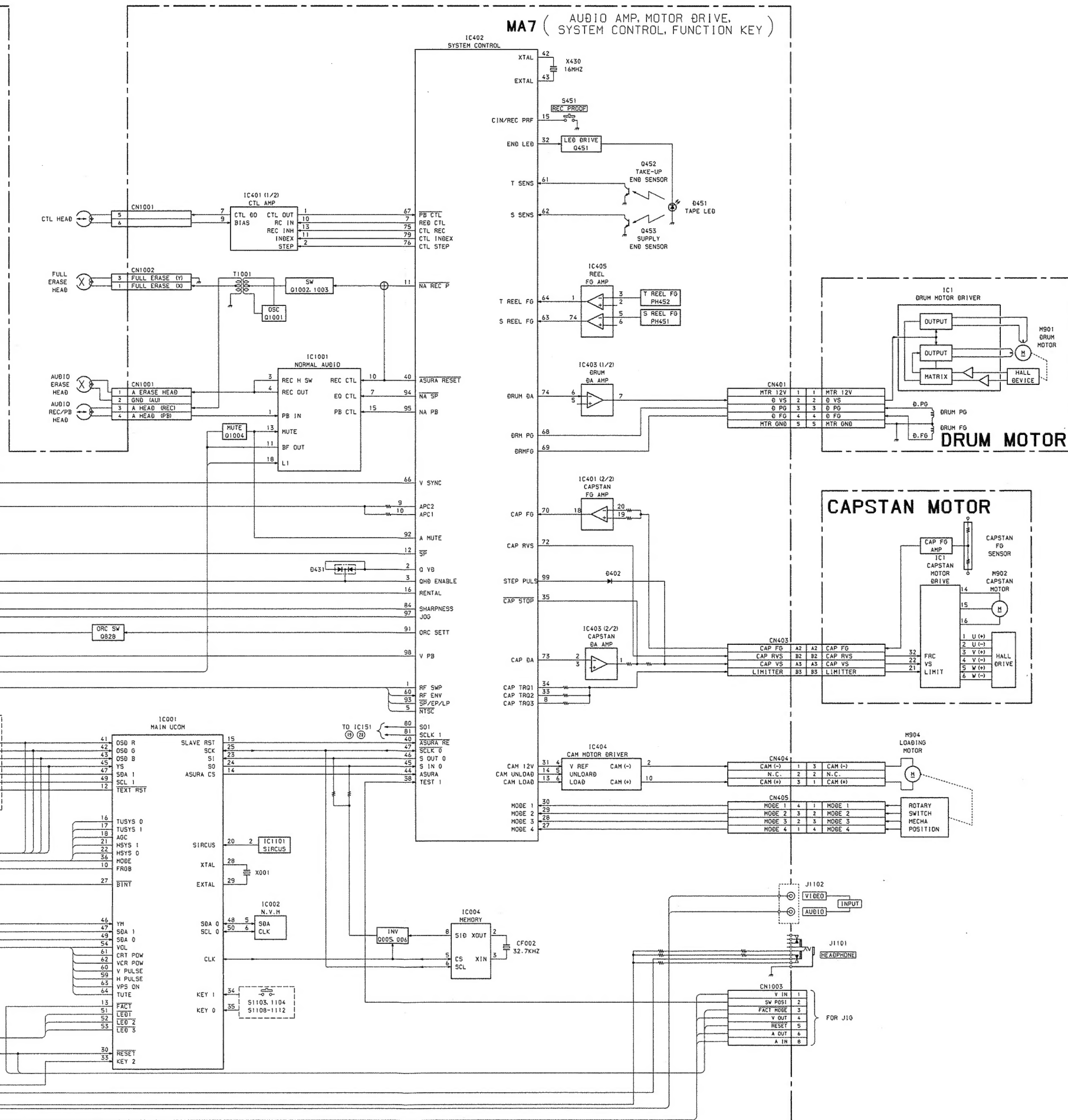


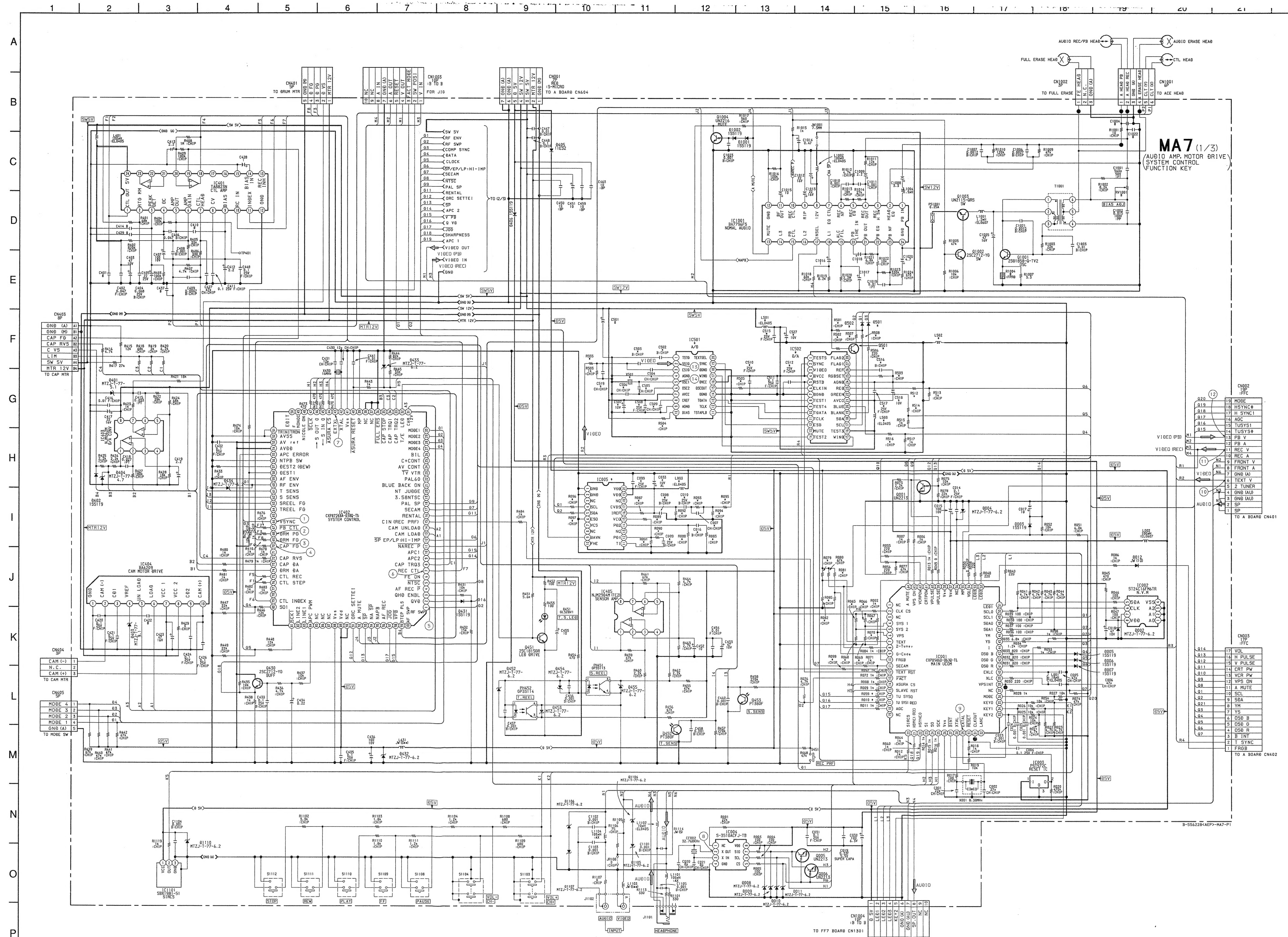
SECTION 4

DIAGRAMS

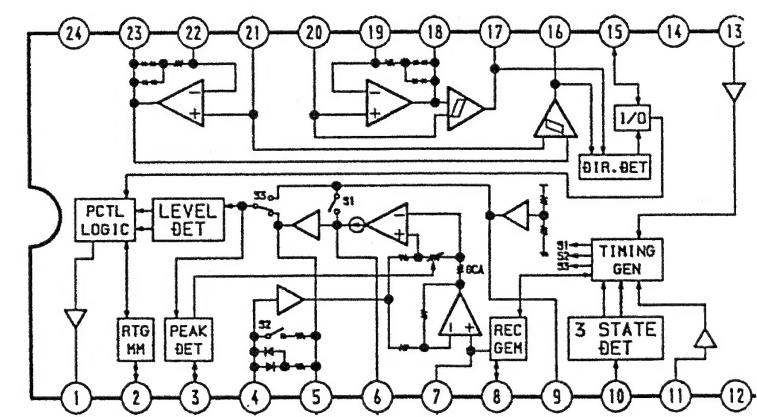
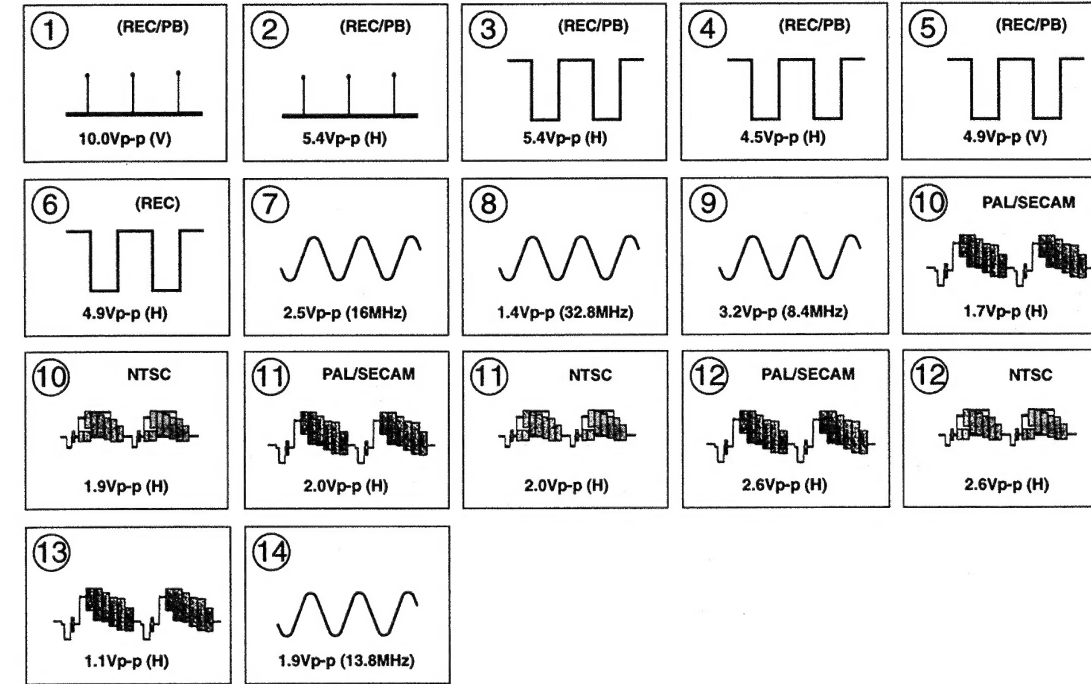
The schematic diagram illustrates the internal circuitry of a video recording system, organized into several functional blocks:

- Input Section (Top Left):** Features connectors for EP CH2, SP CH1, EP CH1, and SP CH2. These connect to IC151 (REC/PB AMP) and IC402 (CN152).
- IC151 (REC/PB AMP):** A central component handling recording and playback signals. It includes pins for PB VIDEO, REC VIDEO, REC CUR, and RF INV.
- IC801 (Y/C PROCESS):** Processes Y and C signals, including Y FB, Y FRECH, CHROMA, NTSC, RF SWP, CDM SYNC, KILLER, CHROMA, Y PB, PB C VIDEO OUT, and ORC.
- IC802 (H DELAY):** Provides H DELAY and C OUT signals.
- IC803 (SECAM JUDGE):** Manages SECAM signals, including C IN, C OUT, CLK, NESECAM SW, and VCD OSC.
- Buffer and Switch Components:** Includes buffers (BUFF 0824, 0816, 0833, 0818, 0821, 0831, 0835, 0830, 0834, 0836, 0837, 0838, 0839, 0840, 0841, 0842, 0843, 0844, 0845, 0846, 0847, 0848, 0849, 0850, 0851, 0852, 0853, 0854, 0855, 0856, 0857, 0858, 0859, 0860, 0861, 0862, 0863, 0864, 0865, 0866, 0867, 0868, 0869, 0870, 0871, 0872, 0873, 0874, 0875, 0876, 0877, 0878, 0879, 0880, 0881, 0882, 0883, 0884, 0885, 0886, 0887, 0888, 0889, 0890, 0891, 0892, 0893, 0894, 0895, 0896, 0897, 0898, 0899, 0900, 0901, 0902, 0903, 0904, 0905, 0906, 0907, 0908, 0909, 0910, 0911, 0912, 0913, 0914, 0915, 0916, 0917, 0918, 0919, 0920, 0921, 0922, 0923, 0924, 0925, 0926, 0927, 0928, 0929, 0930, 0931, 0932, 0933, 0934, 0935, 0936, 0937, 0938, 0939, 0940, 0941, 0942, 0943, 0944, 0945, 0946, 0947, 0948, 0949, 0950, 0951, 0952, 0953, 0954, 0955, 0956, 0957, 0958, 0959, 0960, 0961, 0962, 0963, 0964, 0965, 0966, 0967, 0968, 0969, 0970, 0971, 0972, 0973, 0974, 0975, 0976, 0977, 0978, 0979, 0980, 0981, 0982, 0983, 0984, 0985, 0986, 0987, 0988, 0989, 0990, 0991, 0992, 0993, 0994, 0995, 0996, 0997, 0998, 0999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130, 1131, 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147, 1148, 1149, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 1157, 1158, 1159, 1160, 1161, 1162, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177, 1178, 1179, 1180, 1181, 1182, 1183, 1184, 1185, 1186, 1187, 1188, 1189, 1190, 1191, 1192, 1193, 1194, 1195, 1196, 1197, 1198, 1199, 1200, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1222, 1223, 1224, 1225, 1226, 1227, 1228, 1229, 1230, 1231, 1232, 1233, 1234, 1235, 1236, 1237, 1238, 1239, 1240, 1241, 1242, 1243, 1244, 1245, 1246, 1247, 1248, 1249, 1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277, 1278, 1279, 1280, 1281, 1282, 1283, 1284, 1285, 1286, 1287, 1288, 1289, 1290, 1291, 1292, 1293, 1294, 1295, 1296, 1297, 1298, 1299, 1300, 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1310, 1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1331, 1332, 1333, 1334, 1335, 1336, 1337, 1338, 1339, 1340, 1341, 1342, 1343, 1344, 1345, 1346, 1347, 1348, 1349, 1350, 1351, 1352, 1353, 1354, 1355, 1356, 1357, 1358, 1359, 1360, 1361, 1362, 1363, 1364, 1365, 1366, 1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374, 1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382, 1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414, 1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422, 1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430, 1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1440, 1441, 1442, 1443, 1444

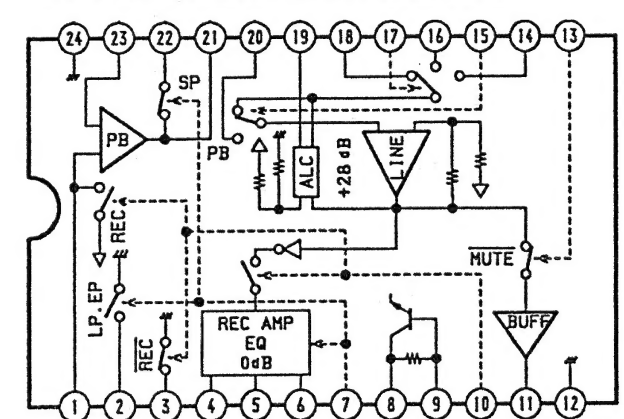




• MA7 (1/3) BOARD WAVEFORMS



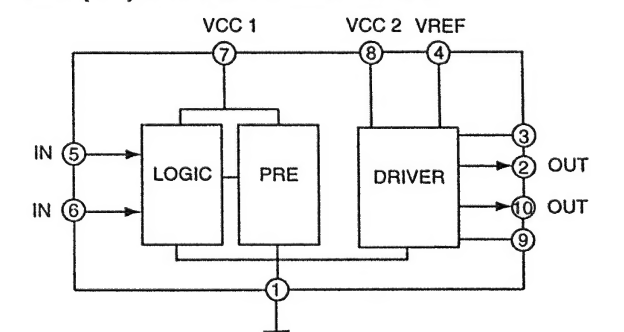
MA7 (1/3) BOARD : IC1001 BA7796FS



MA7 (1/3) BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q001	0.8	4	0.1
Q005	0.2	0.5	0.1
Q006	0.2	0.5	0.1
Q430	(3.5) <3.4>	4.8	(2.8) <2.1>
Q451	0.6	11.2	GND
Q452	*	4.8	GND
Q453	*	4.8	GND
Q501	4.3	4.5	4.4
Q1001	0.3	(11.0) <0.4>	(0.3) <0.2>
Q1002	(0.7) <0.2>	(0.2) <11.3>	GND
Q1003	(0.2) <11.3>	(11.5) <0.4>	11.9
Q1004	0	-0.2	9.4

MA7 (1/3) BOARD : IC404 BA6209



MA7 (1/3) BOARD IC VOLTAGE LIST

IC001	2	0.2	IC005	5	4.7	IC402	57	4.8	IC501	15	2.4			
	4	4.9		6	GND		58	4.8		16	4.9			
	5	4.9		7	4.9		59	GND		17	0.3			
	6	4.9		11	0		60	(0.4) <1.7>		18	GND			
	7	4.9		12	4.7		61	4.8		19	4.5			
	8	4.9		14	4.6		62	4.8		IC502	1	4.9		
	9	4.9		15	4.7		63	*		2	3.5			
	10	0		16	16		64	*		4	4.9			
	11	1.1		17	0.9		65	0.6		5	4.8			
	12	4.9		19	4.8		67	(4.8) <-3.1>		6	2.4			
IC401	13	4.9	20	4.8	IC403	68	0.6	IC404	7	GND				
	14	4.4	1	2.6		69	2.6		8	GND				
	15	4.8	2	0.2		70	0.2		9	4.9				
	16	4.8	3	(1.3) <1.7>		72	0.2		10	0				
	17	4.8	4	1.0		73	2.5		11	0				
	18	4.8	5	1.0		74	2.5		12	4.5				
	20	4.8	6	1.0		75	(4.8) <0>		14	GND				
	21	0.3	7	(2.6) <2.5>		76	0		15	0.3				
	22	0.3	8	(2.6) <2.5>		79	0		16	4.9				
	23	0.1	9	2.5		80	4.5		17	4.9				
IC402	24	0.1	IC403	10	(2.8) <2.5>	IC404	81	4.7	IC405	18	4.4			
	25	1.3		11	0.2		84	(3.3) <4.0>		19	0			
	26	GND		12	4.9		88	GND		20	0			
	27	4.4		13	4.8		89	4.8		21	4.9			
	28	2.4		14	2.3		90	4.8		22	0.1			
	29	2.2		15	GND		91	0		23	0			
	30	4.8		18	0.1		92	0.2		24	GND			
	32	4.8		20	2.4		93	0.2		25	1.4			
	33	4.4		21	2.4		94	(0.3) <4.8>		26	1.4			
	34	4.8		24	4.8		95	(0.2) <4.8>		IC902	1	5.2		
IC403	35	4.8	IC404	1	2.2	IC405	97	4.8	IC406	2	0.9			
	36	(3.3) <2.3>		2	0.2		98	(4.6) <0.1>		3	0.6			
	37	4.8		3	0.2		99	0.2		4	GND			
	38	5		5	2.8		100	2.8		5	0.2			
	39	4.8		7	(3.3) <2.7>		2	2.5		6	1.1			
	40	2.8		8	1.7		3	2.5		7	0.5			
	41	0		9	0.2		4	GND		8	5.2			
	42	0		10	4.8		5	2.5		IC1001	1	2.1		
	43	0		11	(4.8) <0.3>		6	2.5		2	0			
	45	0.2		12	0.2		7	2.5		3	0			
IC404	46	0	IC405	13	0.2	IC406	8	11.8	IC407	4	5.7			
	47	4.7		14	0.2		1	GND		5	5.7			
	48	4.8		15	4.8		2	0.7		6	5.6			
	49	4.7		16	2.1		3	1.0		7	(4.6) <0.2>			
	50	16.48		17	0.2		4	3.4		8	11.9			
	51	0.6		18	0.8		5	0.2		9	11.7			
	52	4.0		27	0.2		6	0.2		10	(0.3) <4.8>			
	53	10.2		28	0.2		7	12.0		11	5.5			
	54	0.5		29	4.8		8	12.0		12	GND			
	55	GND		30	4.8		9	1.0		13	0.2			
IC405	56	4.8	IC406	31	0.2	IC407	10	0.7	IC408	15	(0.2) <5.4>			
	57	4.8		32	0.6		11	Å		16	5.6			
	58	GND		35	1.5		2	1.8		17	5.6			
	59	4.0		34	1.5		3	Å		19	0.2			
	60	0.1		35	2.7		4	GND		20	5.6			
	61	4.3		36	GND		5	*		21	2.2			
	62	4.0		37	GND		6	1.8		22	2.2			
	63	0.2		38	GND		7	*		23	2.2			
	64	4.8		39	GND		8	4.8		24	0			
	IC002	1		GND	40		4.8	IC501		1	2.4	IC1101	1	4.9
2		GND	41	GND	2	2.6	2		4.9					
3		GND	42	2.9	3	1.1	3		1.1					
4		GND	43	2.2	4	0.1	4		1.3					
5		4.7	44	4.4	5	2.1	2		2.6					
6		4.7	45	2.6	6	3.1	3		Å					
7		GND	46	2.5	7	GND	4		GND					
8		4.8	47	2.3	8	1.54	5		1.1					
9		4.8	51	GND	9	0	2		GND					
10		GND	52	GND	10	1.7	3		0					
IC003	0	4.8	53	4.8	IC501	11	GND	PH452	4	*				
	1	GND	54	4.8		12	0							
	2	GND	55	(2.4) <2.3>		13	0							
	4	4.7	56	GND		14	GND							
	IC006													

MA7 (1/3) BOARD * MA

KV-14VS14V45E/14V45A14VB8	KV-14VS14V45E	KV-14VS14V45E	KV-14VS14V45E	KV-14VS14V45E	KV-14VS14V45E
C007	–	0.047 25V F: CHIP	0.047 25V B: CHIP	–	0.047 25V F: CHIP
C008	–	0.033 25V B: CHIP	0.033 25V B: CHIP	–	0.033 25V B: CHIP
C009	–	0.033 25V B: CHIP	0.033 25V B: CHIP	–	0.033 25V B: CHIP
C010	–	0.0022 B: CHIP	0.0022 B: CHIP	–	0.0022 B: CHIP
C033	–	100 10V	100 10V	–	100 10V
C034	–	0.1 25V F: CHIP	0.1 25V F: CHIP	–	0.1 25V F: CHIP
C502	0.022 B: CHIP	0.022 B: CHIP	0.022 B: CHIP	–	0.022 B: CHIP
C503	0.022 B: CHIP	0.022 B: CHIP	0.022 B: CHIP	–	0.022 B: CHIP
C504	220 Ω CH: CHIP	100 Ω CH: CHIP	200 Ω CH: CHIP	–	200 Ω CH: CHIP
C505	15 Ω CH: CHIP	15 Ω CH: CHIP	15 Ω CH: CHIP	–	15 Ω CH: CHIP
C506	15 Ω CH: CHIP	15 Ω CH: CHIP	15 Ω CH: CHIP	–	15 Ω CH: CHIP
C507	100 10V	100 10V	100 10V	–	100 10V
C508	0.1 25V F: CHIP	0.1 25V F: CHIP	0.1 25V F: CHIP	–	0.1 25V F: CHIP
C509	220 Ω CH: CHIP	220 Ω CH: CHIP	220 Ω CH: CHIP	–	220 Ω CH: CHIP
C510	0.1 25V F: CHIP	0.1 25V F: CHIP	0.1 25V F: CHIP	–	0.1 25V F: CHIP
C512	0.1 25V F: CHIP	0.1 25V F: CHIP	0.1 25V F: CHIP	–	0.1 25V F: CHIP
C515	0.1 25V F: CHIP	0.1 25V F: CHIP	0.1 25V F: CHIP	–	0.1 25V F: CHIP
C516	0.01 B: CHIP	0.01 B: CHIP	0.01 B: CHIP	–	0.01 B: CHIP
C517	0.1 25V F: CHIP	0.1 25V F: CHIP	0.1 25V F: CHIP	–	0.1 25V F: CHIP
C518	100 10V	100 10V	100 10V	–	100 10V
C519	15 Ω CH: CHIP	75 Ω CH: CHIP	15 Ω CH: CHIP	–	15 Ω CH: CHIP
C527	100 10V	100 10V	100 10V	–	100 10V
D501	1SS119	1SS119	1SS119	–	1SS119
D502	1SS119	1SS119	1SS119	–	1SS119
IC005	–	SDA5649X	SDA5649X	–	SDA5649X
IC501	CF72416DW	CF72416DW	CF72416DW	–	CF72416DW
IC502	CF72026AW	CF72026AW	CF72026AW	–	CF72026AW
L003	10 μ H L: EL4005	10 μ H L: EL4005	10 μ H L: EL4005	–	10 μ H L: EL4005
L501	10 μ H L: EL4005	10 μ H L: EL4005	10 μ H L: EL4005	–	10 μ H L: EL4005
L502	2W	2W	2W	–	2W
L503	10 μ H L: EL4005	10 μ H L: EL4005	10 μ H L: EL4005	–	10 μ H L: EL4005
Q501	2SC2712-YG	2SC2712-YG	2SC2712-YG	–	2SC2712-YG
R010	–	1K: CHIP	–	1K: CHIP	–
R011	–	1K: CHIP	–	1K: CHIP	–
R065	–	10K: CHIP	–	10K: CHIP	–
R067	–	10K: CHIP	–	10K: CHIP	–
R068	10K: CHIP	–	10K: CHIP	10K: CHIP	–
R089	10K: CHIP	–	10K: CHIP	–	10K: CHIP
R070	10K: CHIP	–	10K: CHIP	10K: CHIP	–
R079	10K: CHIP	10K: CHIP	10K: CHIP	–	10K: CHIP
R081	10K: CHIP	10K: CHIP	10K: CHIP	–	10K: CHIP
R082	–	–	–	–	–
R083	–	6.8K: CHIP	6.8K: CHIP	–	6.8K: CHIP
R085	–	10K: CHIP	10K: CHIP	10K: CHIP	–
R087	–	10K: CHIP	10K: CHIP	–	10K: CHIP
R089	–	1.2M: CHIP	1.2M: CHIP	–	1.2M: CHIP
R089	–	100: CHIP	100: CHIP	–	100: CHIP
R090	–	6.8K: CHIP	6.8K: CHIP	–	6.8K: CHIP
R091	–	1.2M: CHIP	1.2M: CHIP	–	1.2M: CHIP
R092	–	1M: CHIP	1M: CHIP	–	1M: CHIP
R093	–	2.2K: CHIP	2.2K: CHIP	–	2.2K: CHIP
R094	–	4.7K: CHIP	4.7K: CHIP	–	4.7K: CHIP
R095	–	4.7K: CHIP	4.7K: CHIP	–	4.7K: CHIP
R096	–	100: CHIP	100: CHIP	–	100: CHIP
R097	–	100: CHIP	100: CHIP	–	100: CHIP
R099	10K: CHIP	10K: CHIP	10K: CHIP	–	10K: CHIP
R100	10K: CHIP	10K: CHIP	10K: CHIP	–	10K: CHIP
R502	10K: CHIP	10K: CHIP	10K: CHIP	–	10K: CHIP
R504	1K: CHIP	1K: CHIP	1K: CHIP	–	1K: CHIP

All voltages are in V.
*:Can not mesured.
Pin numbers which are not
described are not used.

MAT (2/3) BOARD IC VOLTAGE LIST				
IC801	Pin	V	Pin	V
	1	(2.3) <4.3>	44	(2.9) <3.4>
	3	2.5	45	4.2
	4	(1.5) <0>	46	(2.3) <2.8>
	5	(2.1) <0.3>	47	3.3
	6	(2.7) <2.1>	48	(2.3) <4.3>
	7	(2.9) <3.5>	1	GND
	8	4.5	2	2.1
	9	0.6	3	4.9
	10	3.1	4	2.0
	11	2.2	5	(0) <0.2>
IC802	12	2.7	6	1.8
	13	2.2	7	GND
	14	0.1	8	1.8
	15	GND	9	1.7
	16	2.2	10	0
	17	2.6	11	2.3
	18	0.3	12	0.3
	19	2.6	13	1.7
	20	GND	14	1.7
	21	2.6	15	1.7
IC803	22	0.1	16	4.9
	23	(4.3) <1.8>	17	GND
	24	GND	18	4.9
	25	(0) <2.4>	19	0.8
	26	0.6	20	4.9
	27	4.0	21	1.0
	28	2.6	22	0.3
	29	2.1	23	2.2
	30	2.1	24	GND
	31	2.6	25	2.6
IC804	32	0.5	26	2.9
	33	4.8	27	0.9
	34	0.2	28	GND
	35	0.2	29	2.6
	36	2.6	30	0.5
	37	2.6	31	3.5
	38	(2.3) <3.1>	32	4.9
	39	1.9	33	8
	40	(0) <0.3>	34	1.9
	41	(1.9) <1.8>	35	4.9
IC805	42	GND	36	0.3
	43	(3.1) <3.7>	37	0.3
	44	GND	38	0.3
	45	GND	39	0.3
	46	GND	40	0.3
	47	GND	41	0.3
	48	GND	42	0.3
	49	GND	43	0.3
	50	GND	44	0.3
	51	GND	45	0.3

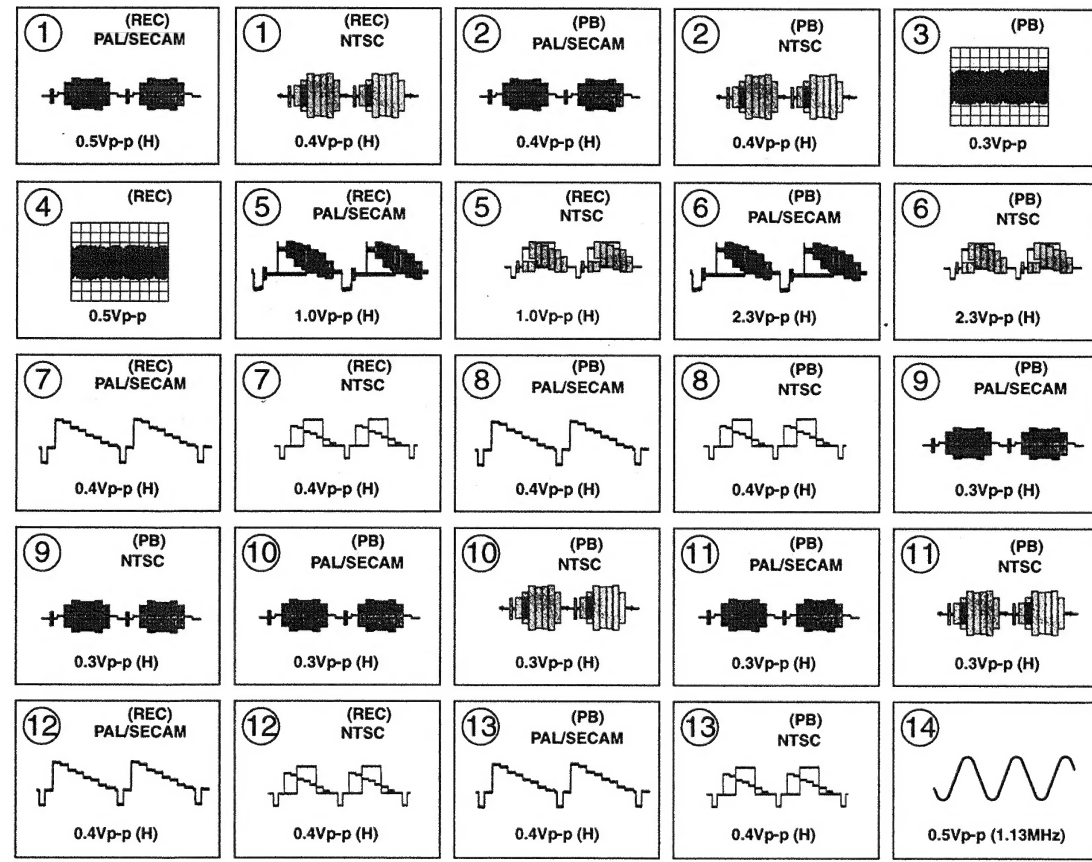
All voltages are in V.
Pin numbers which are not
described are not used.

MA7 (2/3) BOARD TRANSISTOR VOLTAGE LIST

Q	V	C	E
Q801	3.1	1.7	2.5
Q802	(1.7) <2.1>	4.8	(1.1) <1.5>
Q803	1.7	2.7	1.1
Q804	0.9	GND	1.6
Q805	1.6	4.8	0.8
Q806	4.8	0	GND
Q807	0	0	0
Q808	0.0	0	0
Q809	5	1.6	0.9
Q810	1.3	0	GND
Q811	0.0	0.0	GND
Q812	2.5	4.8	1.9
Q813	0.0	0	3.1
Q814	2.5	4.8	1.8
Q815	(1.7) <2.1>	4.8	(1.1) <1.5>
Q816	2.9	4.8	2.3
Q818	4.8	0	GND
Q819	0.0	0	GND
Q820	0.3	0.0	GND
Q821	1.3	4	GND
Q822	0.6	0	GND
Q823	(0.2) <2.3>	(0.6) <4.8>	(0.3) <1.7>
Q825	0	4.8	GND
Q827	0	0	GND
Q828	0.2	(1.7) <2.1>	GND
Q829	(1.7) <2.1>	GND	(1.1) <1.5>
Q830	(4.8) <0.1>	(0.6) <4.8>	4.8
Q831	(2.5) <2.8>	4.8	(1.7) <2.1>
Q832	4.8	0	0
Q833	1.9	4.8	1.3
Q834	4.8	0.3	4.8
Q835	4.8	0.3	4.8
Q836	4.8	0	0.3
Q837	2.6	4.8	1.9
Q839	4.8	GND	GND
Q840	0	0.9	GND
Q843	0	0	0
Q844	(0) <4.8>	(3.4) <0>	GND

All voltages are in V.

MA7 (2/3) BOARD WAVEFORMS

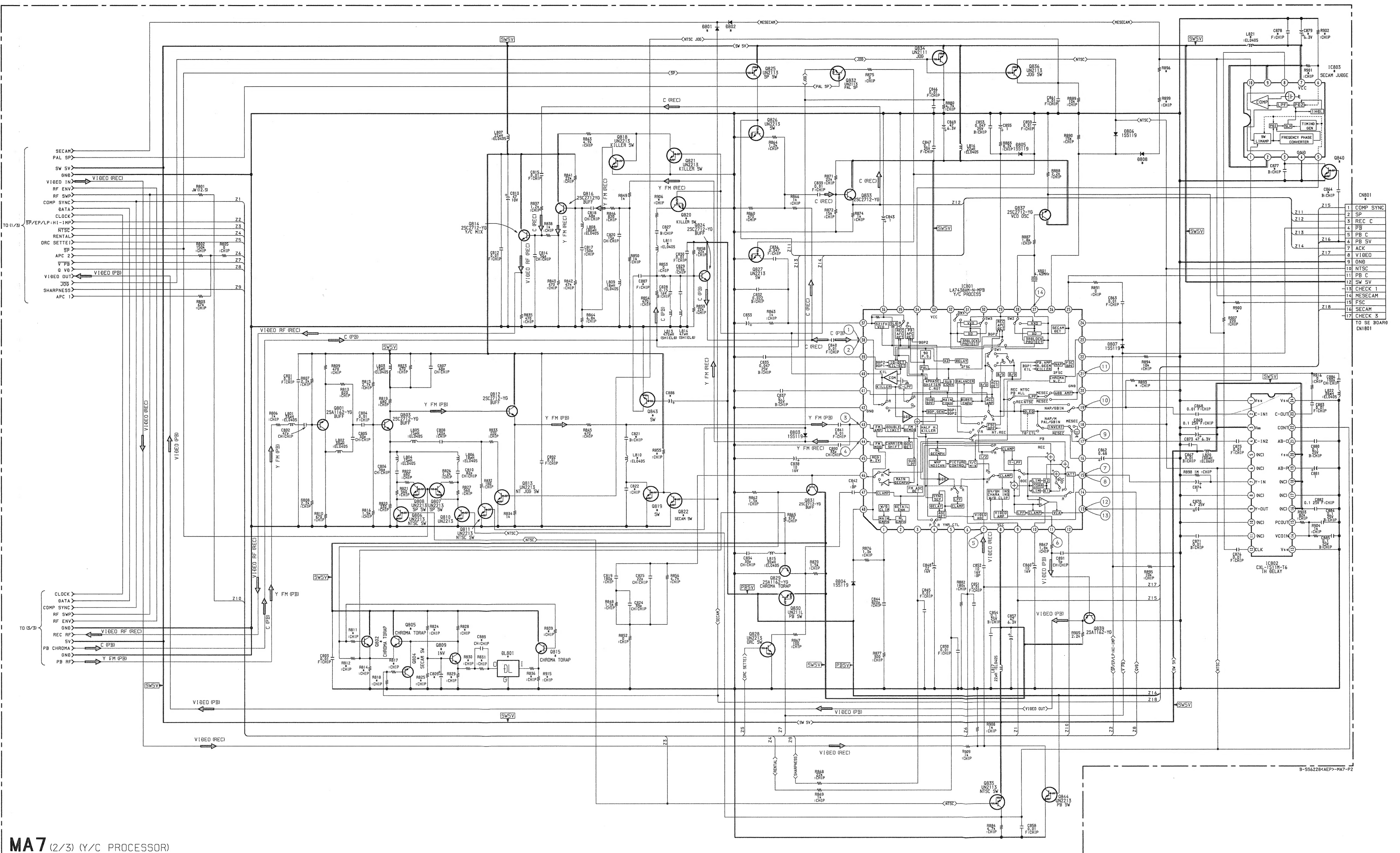


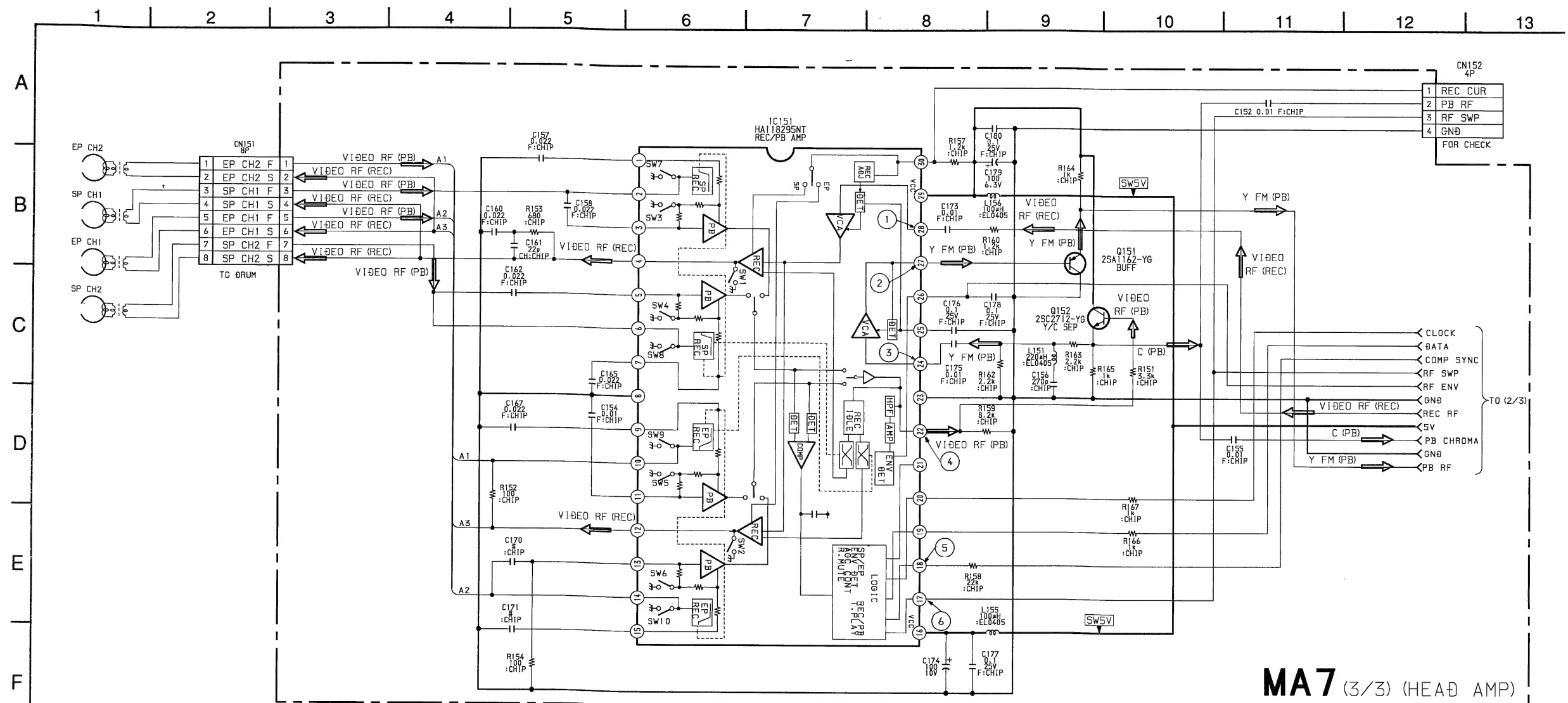
MA7 (2/3) BOARD * MARK LIST

Mark	Value	Mark	Value	Mark	Value	Mark	Value
Q801	3.1	Q802	(1.7) <2.1>	Q803	1.7	Q804	0.9
Q805	1.6	Q806	4.8	Q807	0	Q808	0.0
Q809	5	Q810	1.3	Q811	0.0	Q812	2.5
Q813	0.0	Q814	2.5	Q815	(1.7) <2.1>	Q816	2.9
Q818	4.8	Q819	0.0	Q820	0.3	Q821	1.3
Q822	0.6	Q823	(0.2) <2.3>	Q825	0	Q827	0
Q828	0.2	Q829	(1.7) <2.1>	Q830	(4.8) <0.1>	Q831	(2.5) <2.8>
Q832	4.8	Q833	1.9	Q834	4.8	Q835	4.8
Q836	4.8	Q837	2.6	Q839	4.8	Q840	0
Q843	0	Q844	(0) <4.8>				

--: Not mounted

MA7 (2/3) (Y/C PROCESSOR)





MA7 (3/3) BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q151	(1.6) <4.1>	GND	(2.3) <4.7>
Q152	(1.2) <2.9>	4.8	(0.7) <2.2>

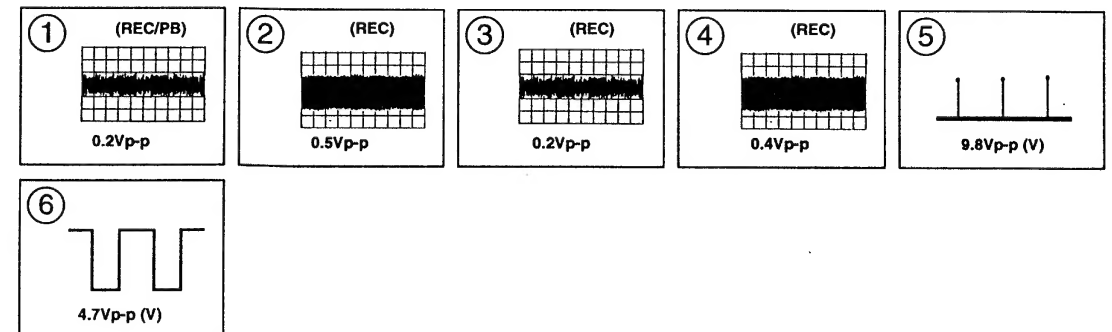
All voltages are in V.

MA7 (3/3) BOARD IC VOLTAGE LIST

IC151	1	(1.9) <2.1>
	2	(3.9) <0>
	3	(0) <0.7>
	4	(0) <4.1>
	5	(0) <0.7>
	6	(4.1) <0>
	7	(4.9) <2.3>
	8	GND
	9	2.3
	10	0
	11	0.7
	12	0
	13	0
	14	0
	15	(4.2) <4.0>
	16	4.8
	17	(2.5) <2.3>
	18	0.3
	19	2.9
	20	3.0
	22	(1.7) <2.4>
	23	GND
	24	3.5
	25	1.5
	26	(0.2) <1.2>
	27	(4.1) <1.6>
	28	(2.0) <2.2>
	29	4.8
	30	(3.9) <4.8>

All voltages are in V.

• MA7 (3/3) BOARD WAVEFORMS

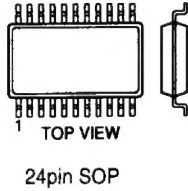


6-6. SEMICONDUCTORS

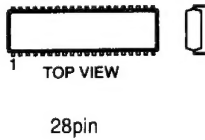
BA6209



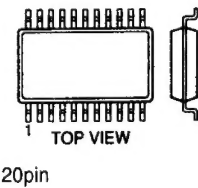
BA7796FS-E2
CX1511M-T6



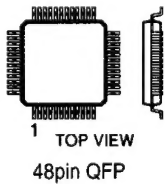
CF70204NW
LA7337



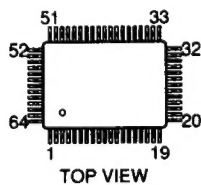
CF72416DW-R
SDA5649X-GEG



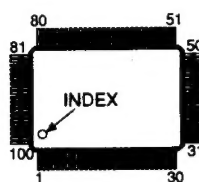
CXA1855Q
LA7438AM-N-MPB



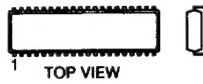
CXA2076Q-TL
CXP85460-063Q-TL



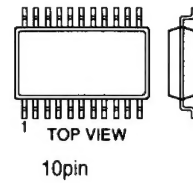
CXP87248A-038Q-TL



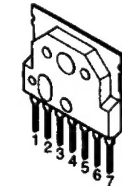
HA118295NT



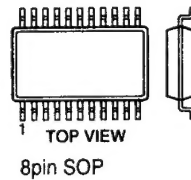
LA7356M



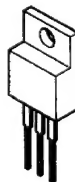
LA7840L



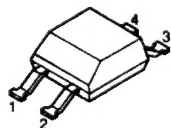
NJM062M
NJM2521M-TE1
NJM2904M
S-3510ACFJ-TB
UPC393G2



NJM78M09FA



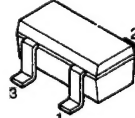
PC123F2



PQ05RF11
PQ09RE11
PQ12RE11



PST572C



SBX1790-51
SBX1981-51



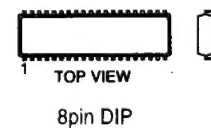
SE115N



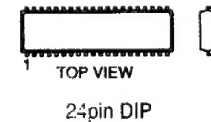
STR-F6523



ST24C16FM6-TR



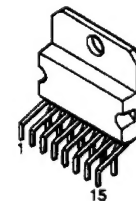
TA8823N



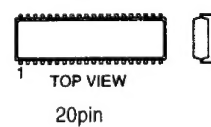
TDA4665T-T



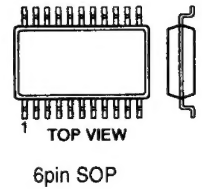
TDA7494



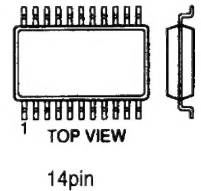
TDA8395T/N3



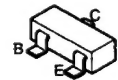
TK11819MTL



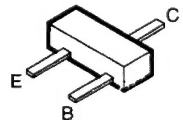
U2860B-BFPG3



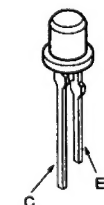
DTA114TK
DTA114TKA-T146
DTA144EKA-T146
DTA143EK
DTC143TK
DTC143TKA-T146
DTC144EKA-T146
UN211B
UN2111
UN2111L
UN2211
UN2213
UN2216
2SA1037AK-T146-R
2SA1162G
2SC1623-L5L6
2SC2712-YG
2SC3052-EF
2SD601A-Q



DTC123YKA-T146



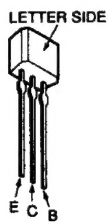
PT380F



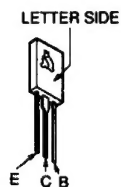
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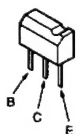
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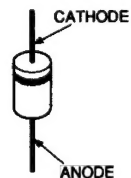
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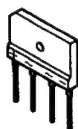
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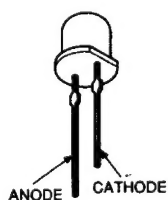
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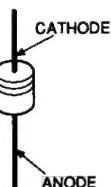
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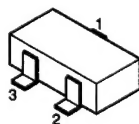
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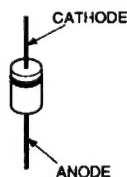
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RD6.8ES-B2
RD9.1ES-B3
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RD6.2M-B1



RG4C



S1WB60



SLR-325VCT31

